## CLAIMS

- Foamable compositions mainly formed by:
  - A) 50-99.9% by weight of a chlorotrifluoroethylene (CTFE) polymer containing at least 80% by moles of CTFE: and
  - B) 0.1-50% by weight of a nucleating agent.
- 2. Foamable compositions according to claim 1 mainly formed by:
  - A) 50-99.9% by weight of a chlorotrifluoroethylene (CTFE) polymer containing at least 80% by moles of CTFE; and
  - B) 0.1-50% by weight of a nucleating agent, under fine powder, having average particle size lower than 50 micron, preferably lower than 20 micron and a melting temperature higher than 250°C.
- 3. Compositions according to claims 1-2, wherein the nucleating agent is selected between the tetrafluoroethylene (TFE) homopolymer or its copolymers having a second melting temperature higher than 250°C.
- 4. Compositions according to claims 1-3, wherein the nucleating agent B) is the tetrafluoroethylene homopolymer (PTFE) having a number average molecular weight lower than 1,000,000, preferably lower than 500,000.
- 5. Compositions according to claims 1-4, wherein the TFE

copolymers are selected from TFE copolymers with perfluoroalkylvinylethers wherein the alkyl is a  $C_1$ - $C_3$ , TFE copolymers with perfluorodioxoles or TFE copolymers with hexafluoropropene (FEP), optionally containing perfluoroalkylvinylethers.

- 6. Compositions according to claims 1-5, wherein the nucleating agent is used in an amount from 5 to 30% by weight, more preferably from 10 to 20%.
- 7. Compositions according to claims 1-6, wherein the nucleating agent B) is the tetrafluoroethylene homopolymer (PTFE), irradiated with gamma rays or with electron beam.
- 8. Compositions according to claims 1-7, wherein the polymer

  A) is formed by at least 90% by moles of CTFE, preferably

  by at least 95% by moles.
- 9. Compositions according to claims 1-8, wherein the polymer
  A) is a CTFE copolymer with one or more comonomers
  selected from:
  - perfluoroalkylvinylethers, wherein the alkyl is  $C_1$ - $C_3$ , preferably perfluoropropylvinylether;
  - dioxoles having formula:

$$CZ = C - Y$$

$$CX_1X_2$$

$$(I)$$

wherein Y is equal to  $OR_f$  wherein  $R_f$  is a perfluoroalkyl having from 1 to 5 carbon atoms, or Y = Z as defined below; preferably Y is equal to  $OR_f$ ;  $X_1$  and  $X_2$ , equal to or different from each other, are -F or -CF<sub>3</sub>; Z is selected from -F, -H, -Cl; preferably in formula (I)  $X_1$ ,  $X_2$  and Z are -F;  $R_f$  is preferably -CF<sub>3</sub>, -C<sub>2</sub>F<sub>5</sub>, or -C<sub>3</sub>F<sub>7</sub>;

- acrylic monomers having general formula:

 $CH_2=CH-CO-O-R_1$  (II)

wherein  $R_1$  is a hydrogenated radical from 1 to 20 C atoms,  $C_1$ - $C_{20}$ , alkyl, linear and/or branched, or cycloalkyl radical, or  $R_1$  is H. The radical  $R_1$  can optionally contain: heteroatoms preferably Cl, O, N; one or more functional groups preferably selected from -OH, -COOH, epoxide, ester and ether; and double bonds;

- vinylidene fluoride (VDF) and/or tetrafluoroethylene
   (TFE).
- 10. A process to prepare molded articles and foamed coatings comprising the extrusion or thermoforming of the compositions of claims 1-9.
- 11. Molded articles and foamed coatings obtainable according to claim 10.
- 12. Articles and foamed coatings according to claim 11 having a void % higher than 10% by volume, preferably higher than 20% by volume, wherein the average cell sizes are

lower than 100 micron, preferably lower than 60 micron.

13. Electric wires formed of a metal conductor and of a foamed coating according to claim 12.